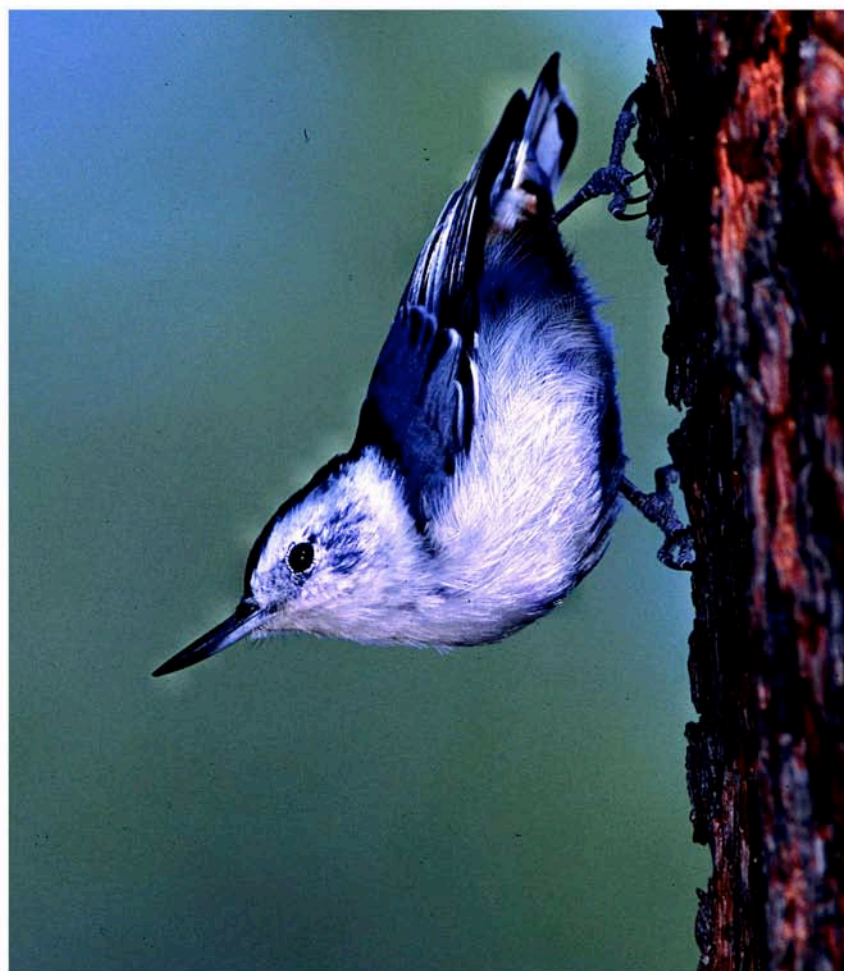


**COORDINATED IMPLEMENTATION PLAN  
FOR BIRD CONSERVATION IN NORTHERN ARIZONA**



Prepared by  
Arizona Steering Committee  
Intermountain West Joint Venture

2005

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### **Intermountain West Joint Venture**

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## CONTENTS

1.	Introduction.....	4
2.	Planning Objectives .....	5
3.	Direction and Connections .....	5 - 8
	North American Bird Conservation Initiative NABCI)	
	International Association of Fish and Wildlife Agencies	
	United States Congress	
	Executive Order 13186 – Protection of Migratory Birds	
	Other Mandates and Programs	
4.	Migratory Bird Initiatives.....	8 - 10
	North American Waterfowl Management Plan (NAWMP)	
	Partners in Flight	
	U.S. Shorebird Conservation Plan	
	<i>Intermountain West Regional Shorebird Plan</i>	
	North American Waterbird Conservation Plan	
5.	Other Bird Conservation Programs.....	11 - 13
	Important Bird Areas Program	
	Ecoregional Conservation Planning	
	Endangered Species Act	
6.	Priority Bird Species in Arizona.....	13
7.	Priority Species-Habitat Relationships.....	13
8.	Priority Habitat Types .....	13
9.	Bird Habitat Conservation Areas.....	14
10.	Landscape Mapping .....	14
11.	Habitat Goals and Objectives Summary from National & Regional Bird Initiatives.....	16
12.	Habitat Conservation Goals and Objectives.....	17

## LIST OF FIGURES AND TABLES

Figure 1	Bird Conservation Regions (BCRs) in Arizona .....	7
Figure 2	Bird Habitat Conservation Areas (BHCAs).....	15
Table One	Priority Species from Bird Conservation Programs .....	21
Table Two	Prioritization of 18 Major Bird Habitats in Northern Arizona.....	25
Table Three	Bird Habitat Conservation Areas .....	26

## APPENDICES

Appendix A	Arizona IBA Site Selection Criteria .....	27
Appendix B	Priority Bird Species from Bird Conservation Programs .....	29
Appendix C	Priority Bird Species of Arizona by Habitat .....	34

## **1. Introduction**

In 1986, the North American Waterfowl Management Plan (NAWMP) was adopted by the United States and Canada to address the conservation and restoration of waterfowl, other migratory waterbirds, and the habitats on which they depend. The Plan aims to restore waterfowl populations to 1970-79 levels and establishes specific population objectives for twenty-five species of ducks and five species of geese, plus Trumpeter and Tundra Swans. It was updated in 1994 to include full participation by Mexico, and again in 1998 to include language strongly encouraging Plan partners to improve coordination with other wildlife initiatives, including those directed at other migratory birds, endangered species, fisheries and biodiversity. It was updated again in 2003.

Six public-private partnerships, or joint ventures, were originally established by the Plan to coordinate the implementation of NAWMP and achievement of population and habitat objectives along flyway lines across North America, with eight more joint ventures having been formed in recent years. These joint venture partnerships include active participation by the U.S. Fish and Wildlife Service, USDA Forest Service, Bureau of Land Management, Natural Resources Conservation Service (USDA) and other federal agencies, as well as state wildlife management agencies and a number of wildlife conservation groups, including Ducks Unlimited Inc., National Wild Turkey Federation, The Nature Conservancy, and the National Audubon Society. Congress established the North American Wetlands Conservation Act (NAWCA) in 1989 to implement the objectives of NAWMP. This program, re-authorized by Congress in 2002 at \$75 million/year by 2007, encourages and rewards partnerships among all wildlife conservation initiatives through two matching grant programs, a standard grant program and a small grant program.

The Intermountain West Joint Venture (IWJV) was established in 1994 as the eleventh habitat joint venture. It encompasses parts of eleven Western states, including the northern part of Arizona. The southern part of Arizona is within the Sonoran Joint Venture. Public agencies and conservation groups work as partners through an IWJV Steering Committee for Arizona to identify, protect, restore and enhance wetlands and other important habitats for waterfowl and other migratory birds, as well as native resident birds such as blue grouse.

The Arizona Steering Committee includes representatives from the Arizona Game and Fish Department, U.S. Fish and Wildlife Service, Bureau of Land Management, USDA Forest Service, The Nature Conservancy, Northern Arizona University, Ducks Unlimited, Zuni Fish and Wildlife Department, White Mountain Apache Tribe, Hopi WEMP, several Audubon Society chapters, and the Western Game Bird Alliance. The IWJV Steering Committee is a regional sub-group of the Arizona Bird Conservation Initiative Program. In 1995 the IWJV Management Board adopted an Implementation Plan, which was intended as a framework for implementing the NAWMP in Arizona and other states of the Intermountain West, and for developing more specific wetland focus area plans in each of those states. Two wetland focus areas were delineated in December 1995 for northern Arizona: Anderson Mesa and White Mountains. Waterfowl objectives were established for the Intermountain West and for Arizona by the IWJV Management Board. These focus areas and objectives were incorporated into the larger IWJV Implementation Plan in 1995.

Waterfowl objectives were established for the Intermountain West and for Arizona by the IWJV Management Board, and are included in the IWJV's 1995 Implementation Plan.

In 2001, the IWJV Management Board determined that the 1995 IWJV Implementation Plan should be updated, as a Strategic Plan, and that it should be rewritten from the ground up, state-by-state. The Board also decided that this updated planning process should attempt to coordinate NAWMP and joint venture objectives with other bird initiatives operating within the Intermountain West region. That same year, the Board funded a project to work with state steering committees in developing coordinated “all bird” implementation plans for all the states of the Intermountain West Joint Venture. The Arizona Steering Committee has met on three occasions in 2002, 2003 and 2004 to develop a state implementation plan.

The coordinated “all bird” implementation plan for Northern Arizona contributes to an updated and expanded overall IWJV Implementation Plan; it will also assist the IWJV Management Board in considering and ranking various habitat protection, restoration and enhancement projects for funding via the North American Wetlands Conservation Act and other programs.

## **2. Planning Objectives for Northern Arizona**

- a. Create a planning forum, through the Arizona Steering Committee of the IWJV in which representatives of state, federal and tribal conservation agencies and wildlife conservation groups work collaboratively to develop coordinated habitat goals, objectives and projects that address the conservation needs of all bird species in northern Arizona.
- b. Review, merge and synthesize the habitat goals and objectives of existing bird conservation plans into a coordinated planning document that reflects the habitat priorities of all bird conservation programs in northern Arizona. This document is intended to guide the Management Board of the IWJV, as well as IWJV partners, in updating and implementing habitat goals and objectives for future bird conservation in the IWJV portion of Arizona.

## **3. Direction and Connections**

By taking a lead role in coordinated implementation planning in the Western states, the IWJV Management Board is following the direction of the **North American Waterfowl Management Plan** (NAWMP-1998/2003 Updates). IWJV is also responding to direction and recommendations from other national sources and programs to attempt coordination of waterfowl and wetland habitat planning with the identified goals of other bird conservation programs. These other national sources and programs include:

**North American Bird Conservation Initiative (NABCI):** NABCI was formed in 1998 as an international forum for public and private interests to coordinate international conservation efforts of existing major migratory bird initiatives. One goal of NABCI is to increase the effectiveness of, and coordination between, existing and new bird conservation initiatives, including the North American Waterfowl Management Plan. As a recommended framework for coordinated bird management, NABCI has adopted and mapped ecological units called Bird Conservation Regions (BCR), a number of which cover the area of the Intermountain West Joint Venture. Arizona is essentially covered by three BCRs. The Sonoran and Mojave Desert BCR (33) covers southwestern Arizona and the western border with Nevada, and is primarily within the Sonoran Joint Venture. The Sierra Madre Occidental BCR (34) is also mostly within the Sonoran Joint Venture, although partly within the IWJV. And a small part of the Chihuahuan Desert BCR (35) extends into southeastern Arizona. The Southern Rockies/Colorado Plateau BCR (16) covers most of northern Arizona, and is the focus of this plan. As the “all bird”

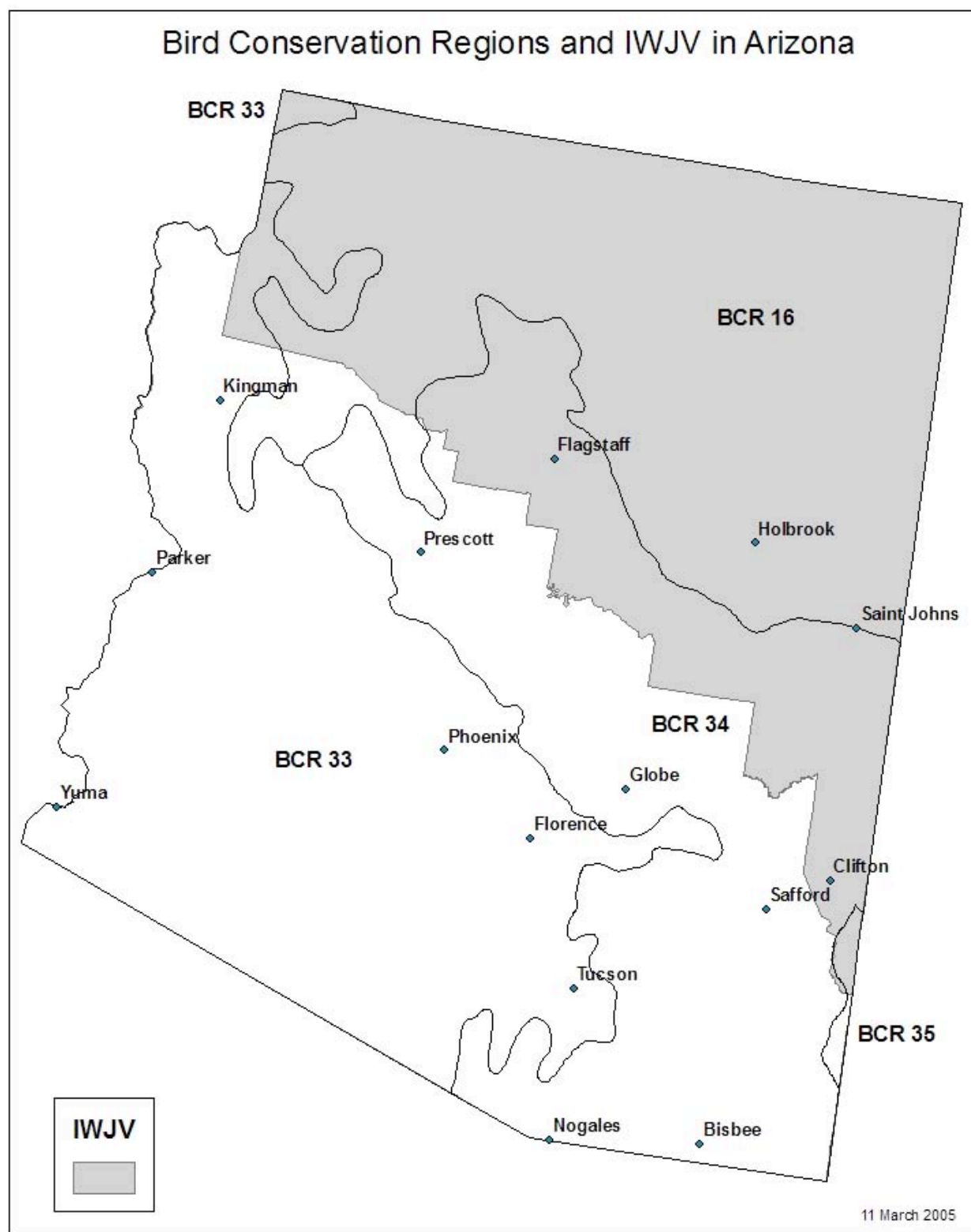
planning process moves forward, the BCRs defined by NABCI (see Figure One) will likely become the standard ecological regions/divisions for migratory bird planning and management.

**International Association of Fish and Wildlife Agencies:** The International Association of Fish and Wildlife Agencies (IAFWA) was founded in 1902 as a quasi-governmental organization of public agencies, including state wildlife agencies charged with the protection and management of North America's fish and wildlife resources. The IAFWA received a federal grant in FY/2001 to conduct "integrated all bird" conservation planning workshops for state wildlife agencies in FY/2001-2002. Since the national objectives of this grant closely parallel the IWJV's coordinated migratory bird planning effort, the IWJV is working with IAFWA staff to ensure that the workshops are complementary. An all-bird workshop, sponsored by IAFWA and Arizona Game and Fish Department, was held in Phoenix in September 2002.

**Congress:** The US Congress strongly supports a public-private partnership approach to protecting and restoring wetlands and other important migratory bird habitats across North America, and they have signaled their support by increasing the federal funds available for migratory bird initiatives. In FY/2002, Congress re-authorized the North American Wetlands Conservation Act (NAWCA) and increased its authorized annual funding level to \$50 million then to \$75 million by FY/2007. Appropriations for NAWCA continue to grow since the authorization level was increased. Congress also recommended a phased-in approach to fully funding the 15 habitat and species joint ventures that were in place in FY/2001, making it clear in budget language that Congress regards these joint ventures as a future primary delivery system for all federally-funded migratory bird programs. In its FY/2001 Interior Appropriations language, the House noted that the joint venture program "continues to be one of the greatest successes of the (Fish and Wildlife) Service, with funding leveraged to a greater extent than all other Service programs combined".

**Executive Order 13186 – Protection of Migratory Birds:** In January 2001 President Clinton signed an executive order requiring all federal agencies which might have a measurable negative impact on migratory birds to develop a Memorandum of Understanding (MOU) with the U.S. Fish and Wildlife Service in order to promote the recommendations of NAWMP, NABCI and other migratory bird programs, as well as other conservation considerations. The Bureau of Land Management and USDA Forest Service have signed MOUs with the Fish and Wildlife Service in 2001, which emphasize a collaborative approach to migratory bird conservation, in cooperation with other agencies and organizations. Because the executive order addresses the integration of bird conservation principles, habitat restoration for migratory birds, and comprehensive planning among various bird conservation programs, these coordinated implementation plans developed by the IWJV should assist these federal agencies with implementation of the MOU. Other federal agencies will presumably also develop MOUs with the Fish and Wildlife Service to implement Executive Order 13186. This presidential Executive Order was reinforced by the Bush Administration on September 12, 2002 when U.S. Fish and Wildlife Service Director Steve Williams issued **Director's Order No. 146**, which indicates, among other things, that joint ventures should deliver the full spectrum of bird conservation.

Figure 1



**Other Mandates and Programs:** In 2002, Congress passed a new Neotropical Migratory Bird Conservation Act (H.R.2217), funding the new Act with an initial \$3 million for a matching grants program; funding for this new program has continued and grown since FY/2003. Congress also created a new State Wildlife Grant program, which provides funding to state wildlife agencies for wildlife planning and conservation. Conservation grants are predicated on development of Comprehensive Wildlife Conservation Strategies, which must be completed by October 2005. The Arizona Game and Fish Department is taking steps to complete this overall strategy by the due date in 2005.

#### **4. Migratory Bird Conservation Initiatives**

There are four migratory bird initiatives for which national, regional and state plans have been or are currently being developed. Although the following programs have different but compatible approaches to planning for bird conservation, the goals, objectives, and priorities of each will be considered in the IWJV Coordinated Implementation Plan for Bird Conservation in Northern Arizona:

**North American Waterfowl Management Plan (NAWMP):** Adopted by the United States and Canada in 1986, and by Mexico in 1994, to address the conservation and restoration of waterfowl, other migratory waterbirds, and the habitats on which they depend. The Plan, as adopted, aims to restore waterfowl populations to 1970-79 levels and establishes specific population objectives for twenty-five species of ducks, five species of geese, and Trumpeter and Tundra Swans. The Plan was updated in 1998 and 2003.

The Intermountain West Joint Venture is one of fourteen public-private partnerships established to coordinate the implementation of NAWMP and the achievement of population and habitat objectives along flyway lines across North America. Public agencies and conservation groups work as partners through an IWJV State Steering Committee in Arizona to identify, protect, restore and enhance wetlands and other important habitats for waterfowl and other migratory birds, as well as native non-migratory birds.

The Arizona Game and Fish Department has prioritized 17 species of waterfowl found in northern Arizona for at least part of their life cycle. These species, grouped into Priority 1, 2, and 3 categories, are listed in **Table One**.

**Partners in Flight:** The national Partners in Flight (PIF) program began in 1989 as a coordinated effort to document and reverse apparent declines in the populations of neotropical migratory birds, those birds that breed north of Mexico and then migrate to Mexico, Central and South America, and the Caribbean in the winter months. The National Fish and Wildlife Foundation took the lead in bringing together federal, state, and local government agencies, foundations, conservation groups, industry and the academic community to address the problem of population declines. The reasons are complex, and include loss of breeding habitat due to fragmentation, alteration, urban expansion and natural disasters; loss or alteration of habitat in non-breeding areas and along migratory routes; and brood parasitism. The PIF program was later expanded to include all non-game land birds.

Today, Partners in Flight is an international program, with PIF working groups in each state. In 2000, the American Bird Conservancy (ABC) published the first comprehensive national plan for the program, titled ***Partners in Flight: Conservation of the Land Birds of the United States***. This plan summarizes the goals and priorities of the various state Bird Conservation Plans, as well as 93 physiographic areas



and seven generalized regions of the continental United States. The plan also encourages better coordination with other initiatives such as the NAWMP, U.S. Shorebird Management Plan, and the North American Waterbird Conservation Plan. PIF initially divided Arizona into 14 Biotic Communities, but for purposes of coordinated bird conservation in 2003, these have now been replaced by the BCRs described on page 4 and shown in Figure One. Passage of the Neotropical Migratory Bird Conservation Act in 2001 provided a new federal funding program and commitment to neotropical migrant species addressed by Partners in Flight. In September 2003, Partners in Flight released a new North American Landbird Conservation Plan.

The Arizona Working Group of Partners in Flight was formed to focus resources of PIF partners on the improvement of monitoring, research, management and education programs involving native, nongame landbirds and their habitats. The working group is made up of professionals from state and federal natural resource agencies, universities, and nongovernmental organizations, including many of the same agencies and organizations as the IWJV steering committee: Arizona Game and Fish Department, U.S. Fish and Wildlife Service, Bureau of Land Management, Bureau of Reclamation, Forest Service (USDA), National Park Service, Audubon Arizona, and several Audubon Society chapters.

In June, 1999, Arizona Partners in Flight released Version 1.0 of the Arizona Partners in Flight Bird Conservation Plan (BCP), which assessed the status of 280 species of breeding birds in Arizona, excluding waterfowl, and identified 43 priority species of Arizona landbirds for conservation efforts. These 43 species utilize 20 major habitats, in 14 established Biotic Communities, throughout Arizona. Northern Arizona, the portion of the state within the IWJV, is home to 32 of these species, in 14 major habitats, during all or part of their life cycle. This draft plan articulated population objectives for some of those 43 priority species and their related habitats. It remains the best summary of species and associated habitat information for neotropical migrant birds and other native non-game landbirds of Arizona, and is one of the main sources of information used in developing a coordinated conservation plan for northern Arizona birds. This document may be found at [www.partnersinflight.org](http://www.partnersinflight.org).

Priority species identified by Partners in Flight in the Arizona BCP are listed and ranked in **Table One** of this planning document. Ranking criteria included Relative Abundance, Breeding Distribution, Winter Distribution, Threats in Breeding Range, Threats-Non-breeding, and Importance of Area, Population Trend, and Population Trend Uncertainty. Species are listed again in **Appendix C**, within the 13 associated habitat groups identified in the Arizona BCP.

**U.S. Shorebird Conservation Plan:** The term shorebird is applied in North America to a large group of birds commonly called sandpipers and plovers, but also includes oystercatchers, avocets, and stilts. Of 214 species of shorebirds found worldwide, 53 regularly occur in the United States and, although they are found at some time of the year in all 50 states, the biology and ecology of most shorebird species is poorly understood. Technical and regional working groups were convened to address some of the known conservation and research issues for shorebirds and in 2000, the ***U.S. Shorebird Conservation Plan*** was published by the Manomet Center for Conservation Sciences, funded by a grant from the U.S. Fish and Wildlife Service. This national plan provides baseline information on shorebird populations and habitat, and addresses some of the known challenges to shorebird conservation, including low reproductive potential and habitat loss. It also articulates hemispheric and national goals for restoring and stabilizing shorebird populations, especially those known to be in decline. These goals emphasize research, monitoring and cooperative landscape management strategies at the international, national, and regional levels. As with NABCI and the Partners In Flight plan, the U.S. Shorebird Conservation Plan

encourages close coordination with other bird conservation initiatives, as well as implementation of shorebird conservation strategies through the Intermountain West Joint Venture and other habitat joint ventures established by the North American Waterfowl Management Plan. The shorebird plan defines Shorebird Planning Regions across North America, which follows the lines of NABCI Bird Conservation Regions. All of Arizona is within the shorebird plan's Intermountain West Shorebird Planning Region.

An *Intermountain West Regional Shorebird Plan* was also released as a draft in 2000. The plan notes that perhaps a million shorebirds breed in the Intermountain West and that millions more migrate through the area each year. The plan recognizes that finding ample high quality fresh water will be the greatest challenge faced by shorebirds in the Intermountain West. The regional plan articulates seven goals and associated objectives and strategies related to habitat management, monitoring and assessment, research, outreach and planning. The planning goal includes objectives to coordinate shorebird planning and projects with other migratory bird initiatives and specifically with the Intermountain West Joint Venture. The Intermountain West plan identifies eleven species of shorebirds that regularly breed in the region, as well as 23 additional species that are annual migrants. The Intermountain West plan also recognizes eleven Key Shorebird Areas, none of which are in Arizona, as well as 42 Managed Shorebird Sites, four of which are in southern Arizona: Bill Williams, Cibola, Havasu, and Imperial National Wildlife Refuges. No Managed Shorebird Sites are within the Arizona portion of the IWJV. A revised version of the Intermountain West Plan was released in March, 2004.

Eighteen priority shorebird species documented in northern Arizona are listed in **Table One**. The Intermountain West Regional Shorebird Plan, when completed, will be a primary source of information for shorebird habitat objectives for the Coordinated Implementation Plan for Bird Conservation in Northern Arizona. Shorebirds and other priority bird species are shown, within their associated critical habitats, in **Appendix C**.

**North American Waterbird Conservation Plan:** The *North American Waterbird Conservation Plan* provides a continental framework for conserving and managing colonial nesting waterbirds, including 209 species of seabirds, coastal waterbirds (gulls, terns, pelicans), wading birds (herons, ibises), and marsh birds, such as certain grebes and bitterns. The overall goal of the plan is to ensure that the distribution, diversity and abundance of populations, habitats (breeding, migratory, and non-breeding) and important sites of waterbirds are sustained or restored throughout their ranges in North America. The geographic scope of the plan covers 28 countries, from Canada to Panama, as well as islands and nearshore areas of the Atlantic, Pacific, Gulf of Mexico, and Caribbean Sea. As with NAWMP and Partners in Flight, the waterbird partnership includes federal, state and provincial wildlife agencies, individuals, and nonprofit conservation organizations. Version One of this Plan (2001) emphasizes seabirds and other colonial-nesting waterbirds. It also concentrates on the northern portions of its geographic scope. Version 2 (due out in 2004) will include more guidance on conservation of non-colonial waterbirds and more details on the needs and priorities of various regions within the overall Plan area, especially the Caribbean, Mexico, and Central America. Also, as with PIF and other migratory bird plans, this plan includes a goal to establish conservation action and exchange information and expertise with other bird conservation initiatives, especially NABCI and the habitat joint ventures established by the North American Waterfowl Management Plan, including IWJV. The plan also calls for establishment of Practical Units for Planning (PUPs) for terrestrial habitats; Arizona falls within the Intermountain West/Southwest Desert PUP.

Volume One of the North American plan covers 165 species of colonial-nesting birds, as well as three grebes that nest semi-colonially. Volume Two will cover 44 species of marsh birds. On October 23, 2001, a second draft of Volume One was released for review. In this draft plan, the conservation status of all North American waterbird species was evaluated, adapting the protocol from Partners in Flight and the U.S. Shorebird Conservation Plan. Under this classification system, a number of species found in Arizona as breeders or migrants fall into the **Species of Moderate Concern** or **Species of Low Concern** categories for North America, Northern Hemisphere, Western Hemisphere, and Cosmopolitan (world-wide) including the American White Pelican, California Gull, White-faced Ibis, Western Grebe, Clark's Grebe, and Green Heron. A number of other species are found in Arizona but classified as **Species Not at Risk** in North America. The status of these species in Arizona may of course be more or less threatened than their global, hemispheric, or continental status.

In December 2001 the process was initiated for developing a regional waterbird conservation plan for the Intermountain West/Southwest Desert Practical Planning Unit. A first draft was released in August 2002. When this regional plan is completed, it will articulate conservation and management goals and objectives for waterbirds in Arizona and other states of the IWJV, as well as identify and describe habitat types and locations of important waterbird habitat. It will hopefully be the primary source of information for waterbird species and habitat objectives for this Coordinated Implementation Plan for Bird Conservation in northern Arizona. Draft species priorities for the Intermountain West Waterbird Plan (June, 2004) are shown in **Table One**.

## 5. Other Bird Conservation Programs:

In addition to the four migratory bird initiative described above, there are a number of other important bird conservation programs which will be reviewed, considered and included in a Coordinated Implementation Plan for Bird Conservation in northern Arizona. These include:

**Important Bird Areas (IBA) Program:** The IBA Program is an international, site-based approach to bird conservation that began in Europe in the mid-1980s, when BirdLife International sponsored a continent-wide inventory of key sites for birds. The effort spread to the United States, and in the mid-1990s, the American Bird Conservancy and National Audubon Society completed a pilot project to identify and describe the Important Bird Areas of Pennsylvania. In the late 1990s the National Audubon Society became the partner designate of BirdLife International for the IBA Program in the United States. As of January 2004, 45 states have state-level IBA programs, including three states that have published guides to their IBAs.

The IBA program recognizes that there are places on the landscape that provide exceptionally valuable or essential habitat for one or more species of birds, including breeding, wintering or migratory habitat. Identifying, recognizing, monitoring, and stewarding these sites can form the basis of a landscape-level conservation network, not just for birds but also for other species of wildlife.

The Arizona IBA Program was re-initiated in January 2002, with the Tucson Audubon Society, after a short period under the Arizona Game and Fish Department (1999-2000). An IBA Scientific Review Committee was established in early 2002, composed of 14 biologists and bird experts from across the state. The committee has met twice and approved 16 sites as IBAs. An additional 22 sites in the Intermountain West Joint Venture region have been proposed as potential IBAs warranting further review. The third IBA technical meeting was held in January 2004, where 10 more sites were reviewed.

Currently, the biggest challenge to additional IBA identification is the lack of quantitative bird data for proposed IBAs; this is particularly evident within the IWJV region of Arizona. A habitat and species occurrence analysis approach for sub-biome restricted species (species with 30% of their population within a given BCR) is being evaluated. Arizona site selection criteria are listed in **Appendix A**.

IBA citizen-science monitoring is already on going at two IBAs within the IWJV (5 more are being monitored within the Sonoran Joint Venture). Monitoring is underway at Tuzigoot and Lower Oak Creek IBAs, and is being planned for the Little Colorado River Watershed IBA in 2004. A professional avian inventory has been funded by Arizona Game and Fish Department for Watson-Willow Lakes IBA in 2004. On-site IBA conservation and restoration work as been initiated by Northern Arizona Audubon Society at Page Springs Fish Hatchery, Lower Oak Creek IBA and Tuzigoot IBA beginning in 2002. At Page Springs, Northern Arizona Audubon, in partnership with Arizona Game and Fish Department, drafted a Wildlife Viewing Area Management Plan. They partnered with the Department to have loop nature trails established, native plantings at degraded sites, interpretive signage, a bird register, a new hiking trail, kiosk, turnstile, IBA signage, and a new small parking area for the trail use. Additionally, they have planted 100+ cottonwood and Gooding willow poles, and are beginning to remove non-native olive trees. At Tuzigoot IBA, a working group has been formed for negotiating and acquiring mining company owned land within the IBA, and restoring the natural hydrology of the marsh. A nest-box project was also initiated along the proposed expanded Lower Oak Creek IBA (wood duck and song bird boxes). Additional IBA conservation work has been funded in 2004.

**Ecoregional Conservation Planning:** The Nature Conservancy (TNC) has adopted ecoregion-based planning as the most effective way to achieve its national mission of preserving a diversity of plants, animals, and natural communities. The planning process used by TNC follows a methodology outlined in their publication *Geography of Hope* (2000) that defines a vision of conservation success at an ecoregional scale, and is based on documenting and mapping a list or “portfolio” of biologically outstanding sites that represent a full complement of ecosystems, natural communities, and species characteristics of the ecoregion. This methodology may be used to direct TNC programs and influence other conservation efforts across the United States. The ecoregional assessments are based on amended ecoregional units delineated by Bailey et al (1998).

Arizona falls within five of The Nature Conservancy’s ecoregions. Most of the IWJV part of the state is within the Colorado Plateau ecoregion. The Arizona-New Mexico Mountains and Apache Highlands ecoregions cover much of central Arizona, and some of the IWJV part of Arizona. The Sonoran Desert ecoregion, which covers about a third of the state, is within the Sonoran Joint Venture. The Mojave Desert ecoregion takes in a small part of northwestern Arizona, bordering Nevada.

Although the ecoregional plans are not specifically designed for bird conservation, they do identify bird species and habitat “conservation targets”, as well as sites which provide important habitat for birds. Birds identified as conservation targets for the five ecoregions are linked to the portfolio sites in those ecoregional plans. Target bird species listed by The Nature Conservancy for each ecological system group were obtained from the literature and from interviews with acknowledged experts. Target bird species for the Arizona-New Mexico Mountains, Colorado Plateau, Apache Highlands and Mojave Ecoregion are listed in **Table One**. Only those bird species that occur within the IWJV portion of northern Arizona are included.

**Endangered Species Act:** The Federal Endangered Species Act (ESA) of 1973, as amended, mandates the protection of threatened and endangered species of plants and animals and the development of a recovery plan for each species. In Arizona, there are a number of birds listed as Endangered (E), Threatened (T) or Candidate (C) species under the ESA, including California Condor, Bald Eagle, and Yellow-billed Cuckoo. Due to their legal status under the ESA, these listed and petitioned species are automatically included in any list of priority bird species for the IWJV in Arizona, even though independent measures are being taken under the ESA to recover their populations.

## 6. Priority Bird Species in Arizona

Many of the bird conservation programs described above, including the federal Endangered Species Act and the North American Waterfowl Management Plan/IWJV, have developed, or will develop as part of their overall planning process, a list of priority bird species, species of concern, or target species, either for Arizona or the entire Intermountain West region. The State of Arizona prepared a Species of Greatest Conservation Need list in 1996 and is included in **Table One**. The National Audubon Society and Partners in Flight have also prepared separate Watch Lists based on species with the highest conservation concern, are threatened and declining, or have restricted ranges. The U.S. Fish and Wildlife Service, Bureau of Land Management and Forest Service also maintain their own “species of concern” lists, which include bird species which might become candidates for listing; these agency lists are also included in **Table One**. The Arizona Steering Committee has reviewed these lists, including target bird species in TNC’s Ecoregional Conservation Plans, and have consolidated these priority species into **Table One**. Priority species are also listed and associated with various agencies and programs’ species ranking systems in **Appendix B**.

## 7. Bird Species-Habitat Relationships

The Arizona Partners in Flight Bird Conservation Plan (BCP) has identified and described 20 habitat types in Arizona, which together provide critical habitat for the state’s 43 Partners in Flight priority species. The 18 habitat types and associated priority bird species found in the IWJV portion of Arizona are shown as **Appendix C**.

## 8. Priority Habitat Types

In August 2003, the Arizona Steering Committee met in Flagstaff and reviewed the major habitat types defined by the *1999 Arizona Partners in Flight Bird Conservation Plan*, plus agricultural lands. Several of these habitats were eliminated, because they were either absent or considered to be of minor importance in northern Arizona. The remaining 18 habitat types were grouped into three categories of priority, A, B and C, defined below. Three criteria were used to rank these habitat types: 1) Statewide importance to birds; 2) Degree of threat; and 3) Opportunities (funding, partnerships, and feasibility for habitat protection, restoration, and enhancement. The three categories were defined as:

- Priority A: High threat, high opportunity, and high value to birds statewide
- Priority B: One criterion may be high, but generally the habitat is of moderate concern
- Priority C: Relatively low threat, low opportunity, low value as habitat statewide

The ranked list of 18 habitat types developed by the Arizona Steering Committee for Northern Arizona, within the IWJV, is shown as **Table Two**.

## **9. Bird Habitat Conservation Areas**

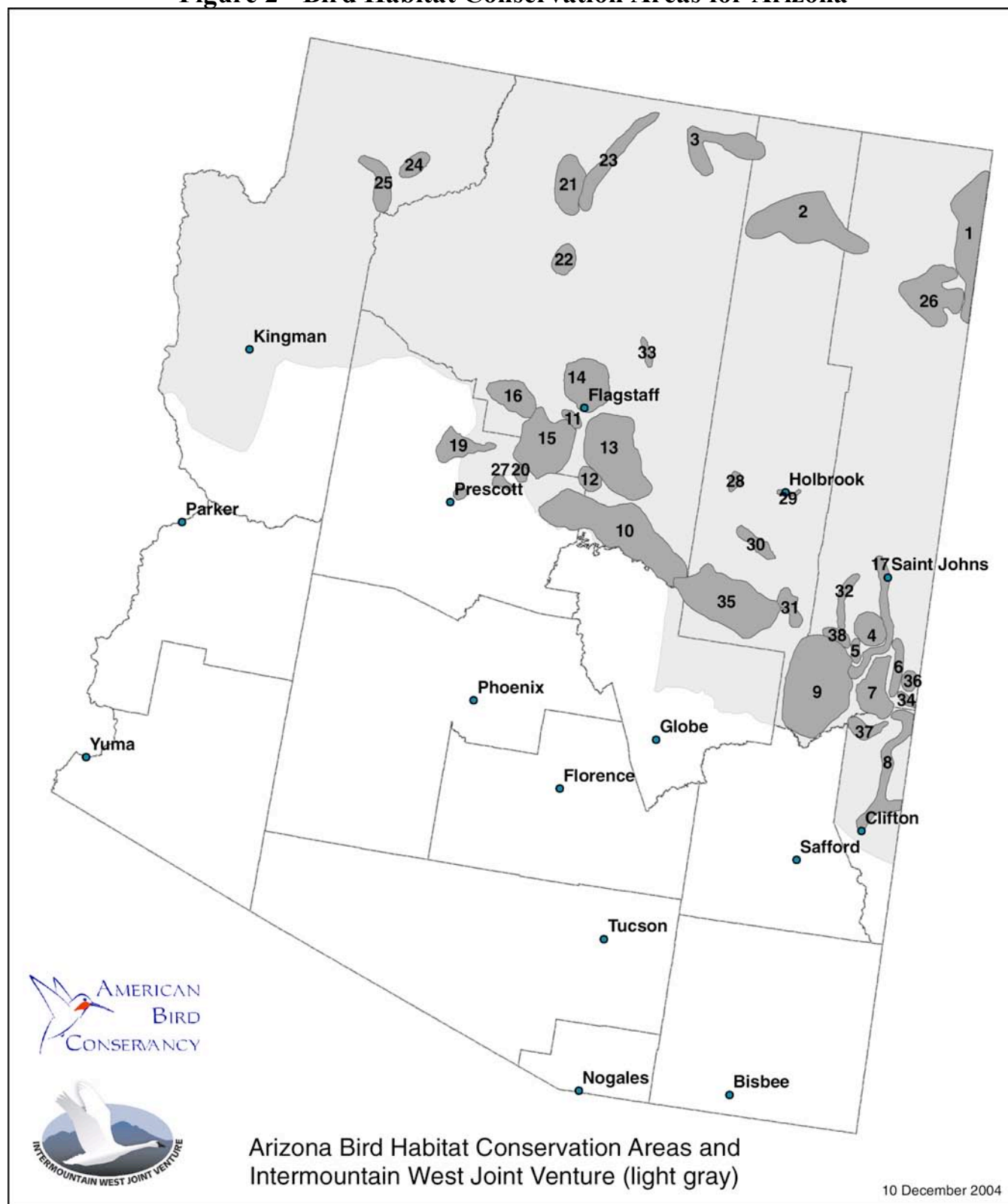
In January 2004, the Arizona Steering Committee met in Phoenix again and began the process of reviewing existing conservation maps and lists of priority habitats in northern Arizona. Included were Wetland Focus Areas already delineated by the Steering Committee, IBA maps, and ecoregional maps from The Nature Conservancy. A number of separate sites, including Important Bird Areas, were combined into 38 Bird Habitat Conservation Areas (BHCAs), which are shown in **Table Three**.

It must be understood that Bird Habitat Conservation Areas are intended to display areas where bird habitat conservation projects may take place, where state partners believe the best opportunity exists for effective conservation activities. However, the BHCAs have no official status. In the case of all of these units (private or public) BHCA designation simply notes where conservation activities could occur. Such action would, of course, be predicated on concurrence, collaboration and cooperation with all landowners involved.

## **10. Landscape Mapping**

The following map depicts the 38 Bird Habitat Conservation Areas as delineated by the Arizona Steering Committee.

**Figure 2 - Bird Habitat Conservation Areas for Arizona**



## **11. Habitat Goals and Objectives Summary from National and Regional Bird Initiatives:**

The following lists describe the priority goals and objectives from each of the four primary national bird initiatives. These goals include management, partnering and research aspects. These goals and objectives may be used as guidelines in developing and prioritizing projects under this statewide plan.

### **North American Waterfowl Management Plan, 1998 Update:**

- Develop measurable scale-specific management objectives that provide the basis for planning and evaluation
- Enhance planning and evaluation by expanding monitoring and assessment capabilities
- Enhance Plan delivery by drawing upon biological information—identify ecosystems most critical to meeting Plan goals, and determine/document major limiting factors
- Design and carry out evaluations in association with conservation strategies that are based on a systematic process of strategic planning.
- Define and implement waterfowl conservation in a landscape context
- Expand habitat conservation coordination across landscapes with other wildlife initiatives and partners
- Seek landscape solutions that benefit waterfowl conservation goals
- Implement community-based projects within a landscape context
- Seek partnerships with other economic sectors to meet common goals
- Encourage partnerships with communities

### **Arizona Partners in Flight Continental Landbird Objectives:**

- Develop projects to help meet population objectives for those species listed in the Intermountain West Avifaunal Biome
- Research causes of population decline and effectiveness of conservation actions
- Monitor populations, obtain trend data for those species needing Immediate Action (IM), Management (MA), and Long-Term Planning and Responsibility (PR)
- Coordinate conservation planning and action across geographic scales and political boundaries
- Promote landscape-level natural resource planning
- Develop and support bird-friendly guidelines for agriculture, forestry, energy industry, urban planning, water management, and other human activities impacting bird habitats
- Work with other conservation initiatives to integrate landbird conservation objectives with other taxa
- Lead in the coordination and development of monitoring and research to provide critical information needed for truly effective adaptive management

### **North American Waterbird Conservation Plan:**

- The Intermountain West regional plan stresses the necessity of conserving a network of high-quality wetland habitats with secure water sources across this arid region
- Priority “Species and Population” strategies focus on acquiring population status, trends, monitoring data; developing analytical tools; and identifying key factors affecting populations
- Priority “Habitat” strategies include identification of key breeding, wintering, migratory, roosting, and foraging habitats; implementation of conservation/management actions which



protect these habitats; projects which further understanding of habitat requirements and threats; development of habitat management plans; identify habitats which may qualify as Audubon IBAs; and development of a communication network among habitat managers

- Priority “Education and Information” strategies include making waterbird conservation information useful for planning/management; increasing effectiveness of communication by partnering with other environmental programs; developing relationships with educators of all levels; developing and distributing educational information; and promotion of practices and policies that reduce impacts to waterbirds
- Priority “Coordination and Integration” strategies include establishing cooperative actions with organizations and initiatives; link waterbird/aquatic habitat conservation with other management actions; exchange information with partners and establish communication networks; develop waterbird plans; and influence environmental policies

#### **United States Shorebird Conservation Plan (Intermountain West Flyway priorities):**

- Habitat Management: Maintain/enhance diverse landscapes that sustain shorebird populations by protecting, restoring, and managing shorebird habitat
- Monitoring and Assessment: Acquire information on shorebird distribution and abundance needed for conservation by developing needed programs
- Research: Collect new information dealing with ecology of important sites; shorebird predators; and shorebird species of concern
- Outreach: Develop an informed and supportive constituency through region-wide programs
- Planning: Achieve regional cooperation by developing a process to facilitate planning among states and agencies and integrate shorebird concerns with land management plans

#### **12. Habitat Conservation Goals and Objectives:**

In August, 2004, IWJV Steering Committee chairs from 11 Western states met with IWJV staff in Salt Lake City for two days to develop draft goals and objectives for the Priority A and B habitats listed in each state plan. Criteria were agreed upon for goals and objectives and each steering committee chair was asked to meet with his/her state steering committee by October 2004 to finalize these goals and objectives, which follow. The collective goals and objectives from all the state plans will provide the basis for overall IWJV habitat objectives included in the updated IWJV Strategic Plan.

SUMMARY: Between 2005 and 2015, Intermountain West Joint Venture (IWJV) partners in northern Arizona will pursue the following directional goals and measurable objectives for priority bird habitat (Priority A and B). The habitat acreage listed for each objective was taken primarily from the total GIS coverage of the Bird Habitat Conservation Areas designated within the IWJV portion of northern Arizona. However, acreage was not available for aspen-dominated forests and was estimated and extrapolated from coniferous forest types in which aspen stands commonly occur.

##### **Priority A Habitats**

High overall rating, high to medium value to birds, high to medium threat, high to medium opportunity for protection, restoration, and or enhancements of habitat in northern Arizona.

##### **Aspen Forests**

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Goal	Reverse the loss of aspen-dominated habitat. Manage for groups of aspen stands of
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different age classes (33% seedling, 33% sapling/pole, and 33% old-growth/mature) in a larger forest complex to ensure continual availability of older trees and snags (>25 cm dbh) for nesting. Use fire or silvicultural treatments to ensure continual regeneration of new stands.

Objective Permanently protect, enhance, and/or restore approximately 10,000 acres of aspen habitat in northern Arizona.

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**High Elevation Grassland (>5000 ft elevation)**

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Goal Manage high elevation grasslands, which include Plains, cold-temperate (Great Basin), subalpine, and montane grasslands and meadows, to maintain grass and forb coverage capable of carrying fire. Restore natural fire regime to reduce small woody shrub and juniper invasion.

Objective Permanently protect, enhance, and/or restore 513,000 acres of high elevation grasslands in northern Arizona

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**High Elevation Riparian (>4000 ft elevation)**

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Goal Increase the amount of native riparian habitat by encouraging natural events that promote regeneration of cottonwood, willow, sycamore, alder, ash, maple, and other native riparian trees. In riparian areas, reduce the negative impacts from inappropriate livestock and elk grazing and browsing.

Objective Permanently protect, enhance, and/or restore 16,000 acres or approximately 640 miles of high elevation, native riparian habitat in northern Arizona. Increase the amount of native riparian habitat by 25 percent in 25 years, and by 100 percent in 50 years.

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**Low Elevation Riparian (<4000 ft elevation)**

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Goal Increase the amount of native, riparian habitat by encouraging natural events that promote regeneration of cottonwood, willow, ash, mesquite, and other native riparian trees. In riparian areas, reduce the negative impacts from inappropriate livestock grazing and browsing.

Objective Permanently protect, enhance, and/or restore 1,200 acres or approximately 50 miles of low elevation, native riparian habitat in northern Arizona. Increase the amount of native, riparian habitat by 25 percent in 25 years, and by 100 percent in 50 years.

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**Freshwater Marshes**

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Goal Maintain and improve existing wetlands areas and associated upland grassland areas in northern Arizona. Create new wetlands to replace those already lost to forest encroachment and human activities.

Objective Permanently protect, enhance, and/or restore 19,000 acres of freshwater marshes in northern Arizona.

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**Open Water**

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Goal Maintain and improve existing marshes, ponds, lakes, reservoirs, and larger rivers that contain open water.

Objective     Permanently protect, enhance, and/or restore 37,000 acres of open water in northern Arizona.

### **Priority B Habitats**

Medium overall rating, one criteria may be high (habitat value, threat, opportunity) but generally of medium importance to birds in northern Arizona.

#### **Spruce-Fir Forest**

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Goal            Maintain current distribution of spruce-fir forest habitat in northern Arizona and manage small openings to promote understory growth. Manage for old-growth in some areas and diverse age classes for structural heterogeneity in others, while maintaining natural, high densities of large snags throughout.

Objective     Permanently protect, enhance, and/or restore 25,000 acres of spruce-fir habitat in northern Arizona.

#### **Mixed Conifer Forest**

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Goal            Maintain current distribution of mixed conifer forests and manage under multiple objectives that include old growth / mature forests in some areas, diverse age classes for structural heterogeneity in others, and relatively high densities of large snags throughout.

Objective     Permanently protect, enhance, and/or restore 60,000 acres of mixed conifer habitat in northern Arizona.

#### **Pine Forest**

---

Goal            Maintain current distribution of ponderosa pine and pine-Gambel oak habitat and manage for old-growth forests in some areas, diverse age classes for structural heterogeneity in others, and relatively high densities of large pine and oak snags throughout.

Objective     Permanently protect, enhance, and/or restore 2,220,000 acres of ponderosa pine and pine-oak habitat in northern Arizona.

#### **Cold-Temperate (Great Basin) Desert Scrub**

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Goal            Halt the quantitative and qualitative decline of continuous stands of big sagebrush and other cold-temperate desertscrub habitats and manage for larger shrubs.

Objective     Permanently protect, enhance, and/or restore 327,000 acres of cold-temperate desertscrub habitat in northern Arizona.

#### **Pinyon-Juniper Woodland**

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Goal            Manage mature pinyon-juniper woodland stand for habitat quality and diversity, which include areas with tall, dense older trees and various vegetative successional stages in other areas.

Objective     Permanently protect, enhance, and/or restore 1,650,000 acres of mature pinyon-juniper woodlands in northern Arizona.

**Irrigated Agricultural Land**

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- |           |  |
|-----------|--|
| Goal      | Assist landowners to maintain or improve the wildlife habitat values on or adjacent to their irrigated croplands.                            |
| Objective | Protect, restore and/or enhance wildlife habitat values on 28,000 acres of privately owned irrigated agricultural lands in northern Arizona. |

**TABLE ONE**

**Priority Species from Bird Conservation Programs**

**North American Waterfowl Management Plan (NAWMP) and the  
Intermountain West Joint Venture (IWJV)**  
(17 species in northern Arizona within IWJV)

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Cinnamon Teal(1)	Blue-winged Teal (3)	Bufflehead (3)
Canada Goose (2)	Canvasback (2)	American Wigeon (3)
Common Merganser (3)	Gadwall (2)	Mallard (1)
Northern Pintail (1)	Northern Shoveler (3)	Redhead (1)
Ring-necked Duck 2	Ruddy Duck (2)	Lesser Scaup (2)
Greater Scaup (2)	Green-winged Teal (3)	

**Arizona Partners in Flight Bird Conservation Plan (APIF-BCP)**  
(32 priority species in northern Arizona within IWJV)

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Swainson's Thrush	Pine Grosbeak	Golden-crowned Kinglet
American Three-toed Woodpecker	Northern Goshawk	Mexican Spotted Owl
Olive-sided Flycatcher	Red-naped Sapsucker	Cordilleran Flycatcher
Purple Martin	Gray Flycatcher	Pinyon Jay
Gray Vireo	Black-throated Gray Warbler	Juniper Titmouse
Montezuma Quail	Band-tailed Pigeon	Swainson's Hawk
American Bittern	MacGillivray's Warbler	Red-faced Warbler
SW Willow Flycatcher	Ferruginous Hawk	Lucy's Warbler
Burrowing Owl	Sage Thrasher	Sage Sparrow
Brewer's Sparrow	Common Black-Hawk	Grasshopper Sparrow
Cassin's Sparrow	W. Yellow-billed Cuckoo	

**U.S. Shorebird Conservation Plan and  
Intermountain West Regional Shorebird Plan**  
(18 species in northern Arizona within IWJV)

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Long-billed Curlew	Willet	Killdeer
Black-necked Stilt	Black-bellied Plover	American Avocet
Spotted Sandpiper	Solitary Sandpiper	Greater Yellowlegs
Marbled Godwit	Mountain Plover	Semipalmated Sandpiper
Long-billed Dowitcher	Western Sandpiper	Least Sandpiper
Red-necked Phalarope	Wilson's Snipe	Wilson's Phalarope

**North American Waterbird Conservation Plan**  
(NA-North America; WH-Western Hemisphere; C-Cosmopolitan)

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Am. White Pelican (NA)	California Gull (NA)	Western Grebe (NA)
Clark's Grebe (NA)	White-faced Ibis (WH)	Snowy Egret (WH)
Franklin's Gull (WH)	Black-crowned Night-Heron (C)	Black Tern (C)
Caspian Tern (C)	Common Tern (C)	

**Intermountain West Waterbird Conservation Plan**  
**Bird Conservation Region (BCR) 16**  
**(Draft Species Priorities -- High (H) and Moderate (M) Concern)**

---

Black Tern (H)	White-faced Ibis (H)	American Bittern (H)
Greater Sandhill Crane (M)	Eared Grebe (M)	Clark's Grebe (M)
Snowy Egret (M)	Black-crowned Night-Heron (M)	American White Pelican (M)

**IWJV Arizona Steering Committee (12-2003)**

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American Dipper	Eared Quetzal	Golden Eagle
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**Mojave Desert Ecoregional Assessment (TNC)**  
(20 target species in northern Arizona within IWJV)

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Long-eared Owl	Golden Eagle	Short-eared Owl
Northern Harrier	Burrowing Owl	Ferruginous Hawk
Blue Grosbeak	Yellow Warbler	Peregrine Falcon
Loggerhead Shrike	Yellow-breasted Chat	Scott's Oriole
Summer Tanager	Phainopepla	Hepatic Tanager
Lucy's Warbler	Vermillion Flycatcher	Mexican Spotted Owl
Arizona Bell's Vireo	Gray Vireo	

**Apache Highlands Ecoregional Assessment (TNC)**  
(14 target species in northern Arizona within IWJV)

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Northern Goshawk	Mexican Spotted Owl	Abert's Towhee
Common Black-Hawk	Western Burrowing Owl	Zone-tailed Hawk
Montezuma Quail	Scaled Quail	Belted Kingfisher
Peregrine Falcon	W. Yellow-billed Cuckoo	Sandhill Crane
Bald Eagle	SW Willow Flycatcher	

**Arizona-New Mexico Mountains Ecoregional Assessment (TNC)**  
(20 target bird species in northern Arizona within IWJV– Priorities 1-3)

---

Mountain Plover (1)	SW Willow Flycatcher (1)	Whip-poor-will (2)
American Dipper (2)	Mexican Spotted Owl (2)	Pine Grosbeak (2)
Northern Goshawk (2)	Band-tailed Pigeon (3)	Red-faced Warbler (3)
W. Yellow-billed Cuckoo (3)	Hammond's Flycatcher (3)	Olive-sided Flycatcher (3)
Grace's Warbler (3)	Bald Eagle (3)	Gray Flycatcher (3)
Am. Peregrine Falcon (3)	Flammulated Owl (3)	MacGillivray's Warbler (3)
Bell's Vireo (3)	Gray Vireo (3)	

**Colorado Plateau Ecoregional Assessment (TNC)**  
(14 target bird species in northern Arizona within IWJV)

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Ferruginous Hawk	W. Yellow-billed Cuckoo	SW Willow Flycatcher
Peregrine Falcon	California Condor	Bald Eagle
Lewis's Woodpecker	Am. Three-toed Woodpecker	Williamson's Sapsucker
Mexican Spotted Owl	Bendire's Thrasher	Lucy's Warbler
Virginia's Warbler	Gray Vireo	

**Federal Endangered Species Act (ESA)**  
(5 bird species in northern Arizona within IWJV)  
(E-Endangered, T-Threatened, C-Candidate)

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California Condor (E)	Mexican Spotted Owl (T)	Yellow-billed Cuckoo (C)
SW Willow Flycatcher (E)	Bald Eagle (T)	

**Species of Conservation Concern – USFWS**  
(26 bird species in BCR 16 within IWJV)

---

Northern Harrier	Swainson's Hawk	Ferruginous Hawk
Golden Eagle	Peregrine Falcon	Prairie Falcon
Mountain Plover	Solitary Sandpiper	Marbled Godwit
Wilson's Phalarope	Flammulated Owl	Burrowing Owl
Short-eared Owl	Black Swift	Lewis's Woodpecker
Williamson's Sapsucker	Gray Vireo	Pinyon Jay
Bendire's Thrasher	Crissal Thrasher	Sprague's Pipit
Virginia's Warbler	Black-throated Gray Warbler	Grace's Warbler
Sage Sparrow	Chestnut-collared Longspur	

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**Sensitive Animal Species – USDA Forest Service**

(7 bird species in Region 3 also found in northern Arizona within IWJV)

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Northern Goshawk	W. Yellow-billed Cuckoo	Snowy Plover
Common Black-Hawk	Bell's Vireo	Eared Quetzal
Greater Sandhill Crane		

**Species of Concern – Bureau of Land Management**

(3 bird species in northern Arizona within IWJV)

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Western Burrowing Owl	White-faced Ibis	Loggerhead Shrike
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**State of Arizona Species of Greatest Conservation Need**

(24 bird species in northern Arizona within IWJV)

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Great Egret	California Condor	Bald Eagle
Willow Flycatcher	Bobolink	Black Rail
Thick-billed Parrot	American Redstart	Veery
Gray Catbird	Spotted Owl	Ferruginous Hawk
Snowy Egret	Yellow-billed Cuckoo	Baird's Sparrow
Osprey	Least Bittern	Belted Kingfisher
Common Black-Hawk	Pine Grosbeak	Northern Goshawk
Peregrine Falcon	Black-billed Magpie	American Bittern

**Wildlife 2006 – Arizona Game and Fish Department (2001)**

(7 game bird species in northern Arizona within IWJV)

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Sandhill Crane	Scaled Quail	Montezuma (Mearns's) Quail
Blue Grouse	Band-tailed Pigeon	Wilson's Snipe
Merriam's Turkey		

**Audubon and/or Partners in Flight Watch Lists**

(29 bird species in northern Arizona within IWJV)

---

California Condor	Swainson's Hawk	Mountain Plover
Mexican Spotted Owl	Flammulated Owl	Short-eared Owl
Band-tailed Pigeon	White-throated Swift	Black Swift
Lewis's Woodpecker	Calliope Hummingbird	Rufous Hummingbird
Olive-sided Flycatcher	SW Willow Flycatcher	Bell's Vireo
Gray Vireo	Pinyon Jay	Bridled Titmouse
Bendire's Thrasher	Virginia's Warbler	Lucy's Warbler
Grace's Warbler	Red-faced Warbler	Olive Warbler
Abert's Towhee	Brewer's Sparrow	Black-chinned Sparrow
Sage Sparrow	Cassin's Sparrow	



## TABLE TWO

### PRIORITIZATION OF 18 MAJOR BIRD HABITATS IN NORTHERN ARIZONA

#### **Priority A Habitats:**

High overall rating: high to medium value to birds, high to medium threat, high to medium opportunity for protection, restoration, and or enhancement of habitat.

Aspen: (Description from APIF – BCP)  
High Elevation Grassland: (Description from APIF – BCP)  
High Elevation Riparian: (Description from APIF – BCP)  
Low Elevation Riparian: (Description from APIF – BCP)  
Freshwater Marshes: (Description from APIF – BCP)  
Open Water: (Description from APIF – BCP)

#### **Priority B Habitats:**

Medium overall rating: one criterion may be high (habitat value, threat, opportunity) but generally of medium importance to birds statewide.

Spruce-Fir (Description from APIF – BCP)  
Mixed Conifer: (Description from APIF – BCP)  
Pine: (Description from APIF – BCP)  
Cold-Temperate Desertscrub: (Description from APIF – BCP)  
Pinyon-Juniper (mature): (Description from APIF – BCP)  
Irrigated Agriculture: (spatially-linked in corridors)

#### **Priority C Habitats:**

Low overall rating: low to medium relative habitat value, threat, and/or opportunity statewide.

Pinyon-Juniper: (Description from APIF – BCP)  
Mojave Desertscrub: (Description from APIF – BCP)  
Alpine: (Description from APIF – BCP)  
Cliff/Rock/Bare Ground: (Description from APIF – BCP)  
Urban: (Description from APIF – BCP)  
Agriculture: (Description from APIF – BCP)

(Original source of information: Arizona Partners in Flight *Bird Conservation Plan* (APIF - BCP) (1999); changes made by Arizona Steering Committee of IWJV)

## TABLE THREE

### BIRD HABITAT CONSERVATION AREAS

In January, 2004, the Arizona Steering Committee met in Phoenix to decide upon and map 38 Bird Habitat Conservation Areas (BHCA) in Northern Arizona. These areas, listed below, reflect a diversity of the priority habitats listed in **Table Two**.

1. Chuska Mountains / Luckachukai Mountains
2. Black Mesa
3. Navajo / Kaibito
4. Springerville Grasslands
5. White Mountains Complex
6. Nutrioso Creek
7. White Mountains Wetlands
8. Blue / San Francisco Rivers
9. White and Black Rivers (White Mountains Apache tribal land)
10. Mogollon Canyon / Beaver Creek
11. Kachina Wetlands
12. Stoneman Lake
13. Anderson Mesa
14. San Francisco Peaks / Hart Prairie
15. Oak Creek Canyons / Page Springs
16. Bill Williams Mountain
17. Little Colorado River to Zion
18. Watson-Willow Lakes
19. Upper Chino Grasslands / Verde
20. Tuzigoot IBA
21. East Kaibab Plateau
22. Yaki-Lipan Points
23. Marble Canyon
24. Mt. Trumbull / Unikaret Mountains
25. Parashant
26. Canyon de Chelly
27. Mingus Mountain
28. Chevelon Creek
29. Cholla / Little Colorado River
30. Dry Lake Complex
31. Show Low Wetlands
32. Mineral Creek
33. Little Colorado River at Wupatki
34. Luna Lake Wetland
35. Rodeo / Chediski Fire
36. Escudilla Mountains
37. Hannagan Meadow
38. Greens Peak

## APPENDIX A – ARIZONA IBA SITE SELECTION CRITERIA

1. Sites important to Endangered or Threatened Species (USFWS), or to special conservation status species in Arizona. This includes Audubon Watch List species for Arizona, Arizona Partners in Flight-Priority Species, Arizona Game and Fish Department- Threatened Birds (1996), and U.S. Fish and Wildlife Service Birds of Conservation Concern for the Colorado Plateau, Sierra Madre Occidental (within the US), and Sonoran/Mojave (within the US) Bird Conservation Regions (BCRs).
2. Sites where significant numbers of birds concentrate for breeding, during migration, or in winter. Arizona IBA criteria for significant concentration of birds:
  - a. Waterfowl: The site regularly supports at least 500 waterfowl (at one time) during some part of the year. The designation “waterfowl” includes such birds as geese, ducks, and swans.
  - b. Waterbirds: The site regularly supports a “significant concentration” (at one time) of Cormorants, Coots, Gulls, Grebes, Loons, Moorhens, Pelicans, Rails, or Terns (2c) Shorebirds:
  - c. Shorebirds: The site regularly supports at least 100 shorebirds (at one time) during some part of the year. The designation “shorebirds” includes such birds as plovers, sandpipers, stilts, avocets, snipe, and phalaropes.
  - d. Wading Birds: The site regularly supports a “significant concentration” of wading birds during some part of the year. The designation “wading birds” includes such birds as bitterns, egrets, herons, and ibises.
  - e. Raptors: The site is regularly an important stop-over site, "bottleneck", or migratory corridor for at least 1,000 raptors (seasonal total) during spring or fall migration. The site is a regular over-wintering area for raptors (at least 200 individuals). The site encompasses a significant nesting concentration of raptors (# to be reviewed).
  - f. Cranes: The site regularly supports 2000 or more cranes (includes migratory stop-over sites, and over-wintering areas- both roosts and feeding areas).
  - g. Landbirds (migration/seasonal concentration): The site is an important migratory stop-over or seasonal concentration site for migratory landbirds. Sites may qualify on the basis of exceptionally high numbers of birds during migration, high density of breeding or over-wintering species as shown from point counts or other surveys. Strong consideration will be given to areas with consistently high overall species diversity or diversity within a particular group (e.g, warblers, flycatchers, sparrows, etc.).

The numerical criteria (2a-2g) are guidelines only. Other factors are considered such as the importance of site to a species rangewide distribution, thus putting the quality of the habitat and location of the site in a rangewide landscape context. Criterion for (2g, landbird density/diversity) covers exceptional sites for which numerical criteria may not be easily applied, such as migrant traps for landbirds.

3. Sites that contain rare or unique habitat or are an exceptional representative of an ecological community type, and that hold important species or species assemblages largely restricted to a distinctive habitat or ecological community type.
4. Supportive Criteria:
  - a. Research: Sites important for long-term research and/or monitoring with publication of research.
  - b. Education: Sites supporting educational programs in which a significant component of the program content focuses on avian ecology.

When the identification component of the IBA Program is completed, it will provide an important component of a coordinated landbird, waterfowl, shorebird and waterbird planning for Arizona. IBA information can be used to set priorities for implementing site-based avian habitat conservation actions throughout the state. As the IBA Program identifies the best and most important habitats for birds in the state, the Arizona IBA Program plans to establish long-term monitoring for IBAs that can be adopted by regional Audubon chapters or other groups.

**APPENDIX B – PRIORITY BIRD SPECIES FROM BIRD CONSERVATION PROGRAMS IN ARIZONA**

Species	N. American Waterfowl Mgmt Plan (NAWMP) and the IWJV	Partners in Flight Bird Conservation Plan (APIF-BCP)	US Shorebird Conservation Plan, Intermountain West Reg. Shorebird Plan	N. American Waterbird Conservation Plan (NAWCP)	IWJV AZ Steering Committee (12-2003)	Mojave Desert Ecoregional Assessment (TNC)	Apache Highlands Ecoregional Assessment (TNC)	AZ-NM Mtns Ecoregional Assessment (TNC)	CO Plateau Ecoregional Assessment (TNC)	Federal Endangered Species Act (EAS)	Species of Conservation Concern - USFWS	Sensitive Animal Species – USDA Forest Service	Species of Concern – Bureau of Land Management	State of AZ Species of Greatest Conservation Need	Wildlife 2006 – AZ Game & Fish Department (2001)	Audubon and/or Partners in Flight Watch List
Abert's Towhee							X	X								X
American Avocet			X													
American Bittern		X												X		
American Dipper					X			X								
American Redstart														X		
Am. Three-toed Woodpecker		X							X							
American White Pelican				X												
American Wigeon	X															
Bald Eagle							X	X	X	X				X		
Band-tailed Pigeon		X						X							X	X
Bell's Vireo						X		X			X					X
Belted Kingfisher							X							X		
Bendire's Thrasher									X		X					X
Black Rail														X		
Black Swift											X					X
Black Tern				X												
Black-billed Magpie														X		
Black-bellied Plover			X													
Black-chinned Sparrow																X
Black-crowned Night-Heron				X												
Black-necked Stilt			X													
Black-throated Gray Warbler		X									X					
Blue Grosbeak						X										
Blue Grouse															X	
Blue-winged Teal	X															
Bobolink														X		
Brewer's Sparrow		X														X
Bridled Titmouse																X
Bufflehead	X															
Burrowing Owl, Western		X				X	X				X		X			
California Condor									X	X				X		X

**COORDINATED IMPLEMENTATION PLAN FOR BIRD CONSERVATION IN NORTHERN ARIZONA**

<b>Species</b>	N. American Waterfowl Mgmt Plan (NAWMP) and the IWJV	Partners in Flight Bird Conservation Plan (APIF-BCP)	US Shorebird Conservation Plan, Intermountain West Reg. Shorebird Plan	N. American Waterbird Conservation Plan (NAWCP)	IWJV AZ Steering Committee (12-2003)	Mojave Desert Ecoregional Assessment (TNC)	Apache Highlands Ecoregional Assessment (TNC)	AZ-NM Mtns Ecoregional Assessment (TNC)	CO Plateau Ecoregional Assessment (TNC)	Federal Endangered Species Act (EAS)	Species of Conservation Concern - USFWS	Sensitive Animal Species – USDA Forest Service	Species of Concern – Bureau of Land Management	State of AZ Species of Greatest Conservation Need	Wildlife 2006 – AZ Game & Fish Department (2001)	Audubon and/or Partners in Flight Watch List
California Gull				X												
Calliope Hummingbird																X
Canada Goose	X															
Canvasback	X															
Caspian Tern				X												
Cassin's Sparrow		X														X
Chestnut-collared Longspur											X					
Cinnamon Teal	X															
Clark's Grebe				X												
Common Black-Hawk		X					X					X		X		
Common Merganser	X															
Common Tern				X												
Cordilleran Flycatcher		X														
Crissal Thrasher											X					
Eared Quetzal					X											
Ferruginous Hawk		X				X			X		X			X		
Flammulated Owl								X			X					X
Franklin's Gull				X												
Gadwall	X															
Golden Eagle					X						X					
Golden-crowned Kinglet		X														
Grace's Warbler								X			X					X
Grasshopper Sparrow		X														
Gray Catbird														X		
Gray Flycatcher		X						X								
Gray Vireo		X				X		X	X		X					X
Great Egret														X		
Greater Scaup	X															
Greater Yellowlegs			X													
Green-winged Teal	X															
Hammond's Flycatcher								X								
Hepatic Tanager						X										
Juniper Titmouse		X														

**COORDINATED IMPLEMENTATION PLAN FOR BIRD CONSERVATION IN NORTHERN ARIZONA**

<b>Species</b>	N. American Waterfowl Mgmt Plan (NAWMP) and the IWJV	Partners in Flight Bird Conservation Plan (APIF-BCP)	US Shorebird Conservation Plan, Intermountain West Reg. Shorebird Plan	N. American Waterbird Conservation Plan (NAWCP)	IWJV AZ Steering Committee (12-2003)	Mojave Desert Ecoregional Assessment (TNC)	Apache Highlands Ecoregional Assessment (TNC)	AZ-NM Mtns Ecoregional Assessment (TNC)	CO Plateau Ecoregional Assessment (TNC)	Federal Endangered Species Act (EAS)	Species of Conservation Concern - USFWS	Sensitive Animal Species – USDA Forest Service	Species of Concern – Bureau of Land Management	State of AZ Species of Greatest Conservation Need	Wildlife 2006 – AZ Game & Fish Department (2001)	Audubon and/or Partners in Flight Watch List
Killdeer			X													
Least Bittern														X		
Least Sandpiper			X													
Lesser Scaup	X															
Lewis's Woodpecker									X		X					X
Loggerhead Shrike						X							X			
Long-billed Curlew			X													
Long-billed Dowitcher			X													
Long-eared Owl						X										
Lucy's Warbler		X				X			X							X
MacGillivray's Warbler		X						X								
Mallard	X															
Marbled Godwit			X								X					
Montezuma (Mearns's) Quail							X									
Mountain Plover			X				X	X	X							X
Northern Goshawk		X					X	X				X		X		
Northern Goshawk, Apache												X				
Northern Harrier						X					X					
Northern Pintail	X															
Northern Shoveler	X															
Olive Warbler																X
Olive-sided Flycatcher		X						X								X
Osprey														X		
Peregrine Falcon						X	X	X	X		X			X		
Phainopepla						X										
Pine Grosbeak		X						X						X		
Pinyon Jay		X									X					X
Prairie Falcon											X					
Purple Martin		X														
Redhead	X															
Red-faced Warbler								X								X
Red-naped Sapsucker		X														
Red-necked Phalarope			X													

**COORDINATED IMPLEMENTATION PLAN FOR BIRD CONSERVATION IN NORTHERN ARIZONA**

<b>Species</b>	N. American Waterfowl Mgmt Plan (NAWMP) and the IWJV	Partners in Flight Bird Conservation Plan (APIF-BCP)	US Shorebird Conservation Plan, Intermountain West Reg. Shorebird Plan	N. American Waterbird Conservation Plan (NAWCP)	IWJV AZ Steering Committee (12-2003)	Mojave Desert Ecoregional Assessment (TNC)	Apache Highlands Ecoregional Assessment (TNC)	AZ-NM Mtns Ecoregional Assessment (TNC)	CO Plateau Ecoregional Assessment (TNC)	Federal Endangered Species Act (EAS)	Species of Conservation Concern - USFWS	Sensitive Animal Species – USDA Forest Service	Species of Concern – Bureau of Land Management	State of AZ Species of Greatest Conservation Need	Wildlife 2006 – AZ Game & Fish Department (2001)	Audubon and/or Partners in Flight Watch List
Ring-necked Duck	X															
Ruddy Duck	X															
Rufous Hummingbird																X
Sage Sparrow		X									X					X
Sage Thrasher		X														
Sandhill Crane							X					X			X	
Savannah Sparrow, Chihuahua												X				
Scaled Quail							X								X	
Scott's Oriole						X										
Semipalmated Sandpiper			X													
Short-eared Owl						X					X					X
Snowy Egret				X										X		
Snowy Plover												X				
Solitary Sandpiper			X								X					
Spotted Owl												X		X		
Spotted Owl, Mexican		X				X		X	X	X						X
Spotted Sandpiper			X													
Sprague's Pipit											X					
Summer Tanager						X										
Swainson's Hawk		X									X					X
Swainson's Thrush		X														
Thick-billed Parrot														X		
Veery														X		
Vermillion Flycatcher						X										
Virginia's Warbler										X	X					X
Western Grebe				X												
Western Sandpiper			X													
Whip-poor-will								X								
White-faced Ibis				X									X			
White-throated Swift																X
Wild Turkey, Merriam's															X	
Willet			X													
Williamson's Sapsucker									X		X					



# COORDINATED IMPLEMENTATION PLAN FOR BIRD CONSERVATION IN NORTHERN ARIZONA

Species	N. American Waterfowl Mgmt Plan (NAWMP) and the IWJV	Partners in Flight Bird Conservation Plan (APIF-BCP)	US Shorebird Conservation Plan, Intermountain West Reg. Shorebird Plan	N. American Waterbird Conservation Plan (NAWCP)	IWJV AZ Steering Committee (12-2003)	Mojave Desert Ecoregional Assessment (TNC)	Apache Highlands Ecoregional Assessment (TNC)	AZ-NM Mtns Ecoregional Assessment (TNC)	CO Plateau Ecoregional Assessment (TNC)	Federal Endangered Species Act (ESA)	Species of Conservation Concern - USFWS	Sensitive Animal Species - USDA Forest Service	Species of Concern - Bureau of Land Management	State of AZ Species of Greatest Conservation Need	Wildlife 2006 - AZ Game & Fish Department (2001)	Audubon and/or Partners in Flight Watch List
Willow Flycatcher														X		
Willow Flycatcher, SW		X					X	X	X	X						X
Wilson's Phalarope			X								X					
Wilson's Snipe			X													
Wood Duck																
Yellow-billed Cuckoo, Western		X					X	X	X	X				X		
Yellow-breasted Chat						X										
Yellow Warbler						X										
Zone-tailed Hawk							X									

NAWMP, IWJV - 17 Species in northern Arizona

Arizona Partners in Flight Bird Conservation Plan (APIF-BCP) – 32 priority species

US Shorebird Plan / Intermountain West Regional Shorebird Plan – 18 species

NAWCP - (NA = North America; WH = Western Hemisphere; C = Cosmopolitan)

IWJV Arizona Steering Committee (12-2003)

Mojave Desert Ecoregional Assessment (TNC) – 20 bird species found in Arizona

Apache Highlands Ecoregional Assessment (TNC) – 14 bird species

AZ – NM Mountains Ecoregional Assessment (TNC) – 20 bird species targets – Priorities 1-3)

Colorado Plateau Ecoregional Assessment (TNC) – 14 Species

Federal Endangered Species Act (ESA) - 5 species in northern Arizona (within IWJV)

Species of Conservation Concern - USFWS – 26 bird species in BCR 16

Sensitive Animal Species – USDA Forest Service – 7 Species in Region 3 also found in northern Arizona

Species of Concern – Bureau of Land Management – 3 bird species

State of Arizona Species of Greatest Conservation Need – 24 bird species in northern Arizona

Wildlife 2006 – Arizona Game & Fish Department (2001) – 7 game bird species in northern Arizona

Audubon and/or Partners in Flight Watch Lists – 29 bird species in northern Arizona

**APPENDIX C – PRIORITY BIRD SPECIES OF ARIZONA BY HABITAT (AZ PARTNERS IN FLIGHT BCP (1999))**

<b>Species</b>	<b>Agriculture - Irrigated</b>	<b>Agriculture - non-irrigated</b>	<b>Alpine</b>	<b>Aspen</b>	<b>Cliff / Rock / Bare Ground</b>	<b>Cold-Temperate Desert shrub</b>	<b>Fresh Water Marsh</b>	<b>High Elevation Grassland</b>	<b>High Elevation Riparian</b>	<b>Low Elevation Riparian</b>	<b>Mixed Conifer</b>	<b>Mojave Desertscrub</b>	<b>Open Water</b>	<b>Pine</b>	<b>Pinyon - Juniper Mature</b>	<b>Pinyon - Juniper</b>	<b>Spruce - Fir</b>	<b>Urban</b>
American Bittern							X											
Am. Three-toed Woodpecker											X						X	
Black-throated Gray Warbler															X	X		
Black Rail, California							X											
Brewer's Sparrow						X												
Burrowing Owl								X										
Common Black-Hawk									X	X								
Cordilleran Flycatcher											X			X			X	
Clapper Rail, Yuma							X											
Ferruginous Hawk								X										
Golden-crowned Kinglet																	X	
Grasshopper Sparrow								X										
Gray Flycatcher															X	X		
Gray Vireo															X	X		
Juniper Titmouse															X	X		
Lucy's Warbler										X								
MacGillivray's Warbler									X									
Northern Goshawk											X			X				
Olive-sided Flycatcher											X			X			X	
Pine Grosbeak																	X	
Pinyon Jay															X	X		
Purple Martin											X			X			X	
Red-faced Warbler									X									
Red-naped Sapsucker				X														
Sage Sparrow						X												
Sage Thrasher						X												
Spotted Owl, Mexican											X							
Swainson's Hawk								X										
Swainson's Thrush									X								X	

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COORDINATED IMPLEMENTATION PLAN FOR BIRD CONSERVATION IN NORTHERN ARIZONA

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<b>Species</b>	<b>Agriculture - Irrigated</b>	<b>Agriculture - non-irrigated</b>	<b>Alpine</b>	<b>Aspen</b>	<b>Cliff / Rock / Bare Ground</b>	<b>Cold-Temperate Desert shrub</b>	<b>Fresh Water Marsh</b>	<b>High Elevation Grassland</b>	<b>High Elevation Riparian</b>	<b>Low Elevation Riparian</b>	<b>Mixed Conifer</b>	<b>Mojave Desertscrub</b>	<b>Open Water</b>	<b>Pine</b>	<b>Pinyon - Juniper Mature</b>	<b>Pinyon - Juniper</b>	<b>Spruce - Fir</b>	<b>Urban</b>
Willow Flycatcher, SW									X	X								
Yellow-billed Cuckoo									X	X								